DUTY STATEMENT

Classification: Research Scientist II (Epidemiology/Biostatistics)			**Position Number**: 811-145-5582-001		
Branch/Section: Reproductive & Cancer Hazard Assessment Branch/Safer Alternatives Assessment & Biomonitoring Section					
Location: Oakland or Sacramento			**Effective Date**:		
Management Designation	☐ Yes	☒ No	**Conflict of Interest**	☒ Yes	☐ No
Supervision Received:	☒ Yes	☐ No	**Supervision Exercised**:	☐ Yes	☒ No

Pursuant to Government Code Section 3100-3109, all public employees are declared to be disaster service workers for the protection of the health and safety and preservation of the lives and property of the people of the state from the effects of natural, man-made, or war-caused emergencies. Such emergencies may result in conditions of disaster or extreme peril to life, property, and resources and an appropriate response. This is of paramount importance to the state in protecting its citizens and resources.

POSITION SUMMARY

The Safer Alternatives Assessment and Biomonitoring Section (SAABS) in the Reproductive and Cancer Hazard Assessment Branch (RCHAB) is responsible for the following main activities: conducting the Department's component of the California Environmental Contaminant Biomonitoring Program (or Biomonitoring California); overseeing community biomonitoring studies to advance the goals of Assembly Bill 617 (AB 617) and support the Community Air Protection Program established by the California Air Resources Board (CARB); providing biostatistical, toxicological, and exposure science support for the Safe Drinking Water and Toxics Enforcement Act (Proposition 65); evaluating fuel-related pollutant exposures; and providing technical assistance to various programs in OEHHA, the Attorney General's Office, and other California governmental entities.

Under general supervision of the Chief, SAABS, the Research Scientist II (Epidemiology/Biostatistics) will plan, organize, and carry out epidemiological research of moderate complexity for biomonitoring studies and act as a technical consultant on specific aspects of the studies. The biomonitoring studies are to support the evaluation of air pollutant exposures in heavily impacted California communities, including those identified under AB 617. The Research Scientist II (Epidemiology/Biostatistics) will develop epidemiological study tools for the studies, statistically analyze biomonitoring results, engage with study partners, and prepare reports and give presentations describing biomonitoring findings. The Research Scientist II (Epidemiology/Biostatistics) performs all duties listed below and other related work.

ESSENTIAL FUNCTIONS

30% **Conduct Research for Community Biomonitoring Studies**. Conduct research of moderate complexity for community biomonitoring studies, including research on air pollutant exposure sources and appropriate biomarkers. Use the research findings to inform the design of epidemiological study tools, such as study protocols, recruitment materials, and exposure questionnaires. Prepare submission of study tools for approval to the appropriate Institutional Review Boards (IRBs), depending on the collaborating institutions involved in the biomonitoring studies. Act as a technical consultant on the implementation of the study tools and the choice of air pollutant biomarkers.

(Attach additional sheet if necessary)

I have read and understood the duties and essential functions of the position and can perform these duties with or without reasonable accommodation: **Employee Signature:**	**Date**:
I certify that the above accurately represent the duties of the position: **Supervisor Signature:**	**Date**:
PERSONNEL USE ONLY: This personnel action has been reviewed and approved by:	
Personnel Analyst Signature:	**Date:**

30% **Conduct Statistical and Epidemiological Analyses.** Perform statistical power calculations to help inform the design of community biomonitoring studies. Review study datasets received from external collaborators for accuracy and completeness. Develop a tracking system to organize and manage the datasets. Conduct statistical analyses of biomarker results from community biomonitoring studies to evaluate exposures to chemicals of concern in community residents. Calculate appropriate summary statistics for inclusion in results return packets to study participants. Investigate predictors of chemical levels in participants through epidemiological analyses of exposure questionnaire data and other available exposure information, such as air pollution mapping data. Compare the results of these analyses to other biomonitoring studies in California and the US to determine if community residents have elevated levels of particular air pollutants. Conduct statistical analyses to evaluate exposure disparities and time trends in biomarker levels. Use the analyses to examine the effectiveness of exposure mitigation strategies.

15% **Engage with Biomonitoring Study Partners and Scientific Experts**. Identify potential academic and community biomonitoring study partners, such as community organizations, laboratory scientists, and public university researchers. Schedule consultation meetings with these potential partners and other scientific experts to conceive and plan community biomonitoring studies. Develop agendas for the consultation meetings, including preparing discussion questions to help achieve the meeting goals.

15% **Communicate Biomonitoring Findings**. Prepare written reports to summarize biomonitoring findings. Prepare and give presentations to a wide range of audiences, such as community stakeholders and other government agencies, to clearly convey key biomonitoring results for chemicals of concern in heavily burdened communities. Give presentations to the Biomonitoring California Scientific Guidance Panel (SGP) to obtain input on biomonitoring study design and implementation. Present biomonitoring findings at scientific conferences to share OEHHA's work on direct exposure measurements of air pollutants through biomonitoring.

10% **Coordinate Community Biomonitoring Study Activities**. Act as a liaison between study partners to coordinate the implementation of community biomonitoring study activities, including fieldwork, sample collection, delivery, and management, and secure handling of data. Help develop fieldwork and sample management protocols. Assist with training field staff on the appropriate use of study tools and adherence to study protocols to ensure compliance with IRB requirements. Coordinate purchase of necessary study supplies and equipment. Coordinate communication between SAABS staff, external collaborators, and laboratory staff during community biomonitoring studies**.**

REQUIRED QUALIFICATIONS

Knowledge of:

- Principles of epidemiological research
- Statistical and epidemiological data analysis methods
- Environmental health sciences, including chemical hazard identification and exposure evaluation

Ability to:

- Use statistical software packages (e.g., SAS, R).
- Write complex scientific documents, such as reports, project summaries, and journal articles
- Communicate effectively to scientific colleagues, managers, external stakeholders, and the general public

DESIRED QUALIFICATIONS

- Knowledge of air pollution exposures in heavily impacted communities
- Experience working in a multidisciplinary team and with external partners

WORKING CONDITIONS

- OEHHA has a hybrid work environment that includes work in an office setting in a high-rise building and telework at home, and fieldwork
- Travel across California for biomonitoring study activities
- Extensive computer use, which involves prolonged sitting, viewing of a monitor, and repetitive motion
- Time-critical assignments

- May be required to travel to other OEHHA locations for business-related needs as necessary

DUTY STATEMENT

Classification: Research Scientist I (Epidemiology/Biostatistics)			**Position Number**: 811-145-5577-xxx		
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Location: Oakland or Sacramento			**Effective Date**:		
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Under supervision of the Chief, SAABS, the Research Scientist I (Epidemiology/Biostatistics) will plan, organize, and carry out epidemiological research of limited scientific scope and complexity for biomonitoring studies and act as a technical consultant on specific aspects of the studies. The biomonitoring studies are to support the evaluation of air pollutant exposures in heavily impacted California communities, including those identified under AB 617. The Research Scientist I (Epidemiology/Biostatistics) will assist with the development of epidemiological study tools for the studies, conduct less complex statistical analyses of biomonitoring results, join meetings with study partners, and prepare initial drafts of reports and give presentations describing biomonitoring findings. The Research Scientist I (Epidemiology/Biostatistics) performs all duties listed below and other related work.

ESSENTIAL FUNCTIONS

30% **Conduct Research for Community Biomonitoring Studies**. Conduct research of limited scope and complexity for community biomonitoring studies, including research to inform the development of epidemiological study tools like study protocols, recruitment materials, and exposure questionnaires. With oversight from senior SAABS scientists, prepare study tools and other required documents for submission to the appropriate Institutional Review Boards (IRBs). Carry out literature reviews to help identify appropriate biomarkers for air pollutants of concern and summarize the findings.

30% **Conduct Statistical and Epidemiological Analyses.** Perform statistical power calculations to help inform the design of community biomonitoring studies. Provide a preliminary review of study datasets from external collaborators for accuracy and completeness. Organize and track the datasets. Under direction of senior SAABS scientists, conduct less complex statistical analyses of biomarker results from community biomonitoring studies to evaluate exposures to air pollutants of concern in community residents. Calculate appropriate summary statistics for inclusion in results return packets to study participants. Research predictors of air pollutant levels in participants through less complex epidemiological analyses of exposure questionnaire data and other available exposure information, such as air pollution mapping data. Compare the results of these analyses to other biomonitoring studies in California and the US to determine if community residents have elevated levels of particular air pollutants.

15% **Communicate Biomonitoring Findings**. Prepare draft reports summarizing biomonitoring findings for review by senior SAABS scientists. Prepare draft presentations for community stakeholders to clearly convey key biomonitoring results for air pollutants of concern in communities. Provide senior staff with support to develop presentations on community biomonitoring studies for meetings of the Biomonitoring California Scientific Guidance Panel (SGP). Work with senior SAABS scientists and scientists at CDPH to prepare summary statistics from community studies for posting to the Biomonitoring California online results database.

15% **Participate in Meetings with Biomonitoring Study Partners and Other Stakeholders**. Participate in meetings with biomonitoring study partners and other stakeholders, including academic, laboratory, and community partners, CARB staff, air district staff, and other interested parties. Schedule meetings and draft agendas to help achieve the meeting goals.

10% **Conduct Fieldwork and Sample Management for Community Biomonitoring Studies.** Develop less complex aspects of fieldwork and sample management protocols. Train field staff on the appropriate use of study tools and adherence to protocols to ensure compliance with IRB requirements. Help identify and purchase appropriate supplies and equipment for community biomonitoring studies. Under guidance of Senior SAABS staff, carry out sample collection, storage, shipment, and long-term management of samples. Help coordinate communication between SAABS staff, external collaborators, and laboratory staff during community biomonitoring studies**.**

REQUIRED QUALIFICATIONS

Knowledge of:

- Principles of epidemiological research
- Statistical and epidemiological data analysis methods
- Environmental health sciences, including chemical hazard identification and exposure evaluation

Ability to:

- Use statistical software packages (e.g., SAS, R)
- Prepare scientific documents, such as reports, project summaries, and journal articles
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DESIRED QUALIFICATIONS

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